

REMARKS

The Office Action dated December 7, 2006 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

In accordance with the foregoing, claims 1-30 have been amended to improve clarity of the features recited therein and claims 31-36 have been cancelled, without prejudice or disclaimer. No new matter is being presented, and approval and entry are respectfully requested. As will be discussed below, it is also requested that all of claims 1-30 be found allowable as reciting patentable subject matter.

Claims 1-30 are pending and under consideration.

REJECTION UNDER 35 U.S.C. § 112:

In the Office Action, at page 2, claim 12 was rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness.

In response, claim 12 has been amended to improve clarity and antecedent support.

Accordingly, it is respectfully requested that the § 112, second paragraph rejections to the claims be withdrawn.

OBJECTIONS TO THE CLAIMS:

In the Office Action, at page 2, claims 31-36 were objected to for failing to further limit the subject matter of a previous claim. Claims 31-36 have been cancelled, without

prejudice or disclaimer and, accordingly, the objections to these claims are rendered moot. It is respectfully requested that the objections to the claims be withdrawn.

REJECTION UNDER 35 U.S.C. § 102:

In the Office Action, at page 3, claims 1, 2, 6-8, 11, 16, 23, 28, 29, and 31-35 were rejected under 35 U.S.C. § 102 as being anticipated by U. S. Patent No. 6,892,341 to Golitschek (“Golitschek”). The Office Action took the position that Golitschek describes all the recitations of independent claims 1, 16, 23, 28, and 29 and related dependent claims. This rejection is traversed and reconsideration is requested.

Independent claim 1, upon which claims 2-15 and 37 are dependent, recites a method, including providing a set of predetermined sequences of redundancy parameters, selecting at least one of said set of predetermined sequences, and transmitting information indicating the selected at least one sequence to a terminal device to provide said redundancy parameters for an automatic repeat request processing at said terminal device.

Independent claim 16 recites a terminal device, including receiving means for receiving information indicating a selected sequence of redundancy parameters, and parameter generating means, operably connected to said receiving means, for generating said selected sequence of redundancy parameters for an automatic repeat request function in response to receipt of said information to apply a redundancy strategy to said automatic repeat request function.

Independent claim 23 recites a network device, including selecting means for selecting a sequence of redundancy parameters, generating means, operably connected to said selecting means, for generating information indicating said selected sequence, and transmitting means, operably connected to said selecting means, for transmitting said information to a terminal device to provide a communication link to said terminal device.

Independent claim 28 recites a system, including a terminal device configured to apply a redundancy strategy to an automatic repeat request function, said terminal device including a receiver configured to receive information indicating a selected sequence of redundancy parameters, and a parameter generating unit, operably connected to said receiver, configured to generate said selected sequence of redundancy parameters for said automatic repeat request function in response to the receipt of said information, and a network device, operably connected to a terminal device, configured to provide a communication link to said terminal device to provide redundancy parameters for an automatic repeat request processing at said terminal device. The network device includes a selecting unit configured to select a sequence of redundancy parameters, a generator, operably connected to said selecting unit, configured to generate information indicating said selected sequence, and a transmitter, operably connected to said selecting unit, configured to transmit said information to said terminal device.

Independent claim 29, upon which claims 17-22 are dependent, recites a terminal device, including a receiver configured to receive information indicating a selected sequence of redundancy parameters, and a parameter generating unit, operably connected

to said receiver, configured to generate said selected sequence of redundancy parameters for an automatic repeat request function in response to the receipt of said information to apply a redundancy strategy to said automatic repeat request function.

Independent claim 30, upon which claims 24-27 are dependent, recites a network device, including a selecting unit configured to select a sequence of redundancy parameters, a generator, operably connected to said selecting unit, configured to generate information indicating said selected sequence, and a transmitter, operably connected to said selecting unit, configured to transmit said information to a terminal device to provide a communication link to said terminal device.

As will be discussed below, Golitschek fails to disclose or suggest the elements of any of the presently pending claims.

According to the presently claimed application, a predetermined sequence of redundancy parameters is provided, from which one sequence is selected and information indicating the selected sequence is transmitted to a terminal device. Therefore, a network operator is able to select redundancy version strategies to be used by the terminal device, while little signaling is required between the network and the terminal device.

In contrast thereto, Golitschek generally describes a hybrid ARQ retransmission method involves encoding data packets with a forward error correction (FEC) technique prior to transmission. The data packets are retransmitted based on an automatic repeat request and subsequently soft-combined with previously received erroneous data packets either on a symbol-by-symbol or a bit-by-bit basis. The symbols of the erroneous data

packets are modulated by employing a first signal constellation. The symbols of the retransmitted data packets are modulated by employing at least a second signal constellation. Each symbol bit has a mean bit reliability defined by the individual bit reliabilities over all symbols of the predetermined signal constellation. The first constellation and the at least second signal constellation are selected such that the combined mean bit reliabilities for the respective bits of all transmissions are averaged out.

Therefore, Golitschek describes improving error correction performance and tailoring bit reliabilities over retransmissions in a way that the mean bit reliabilities get averaged out. This is achieved by choosing a predetermined first and at least second signal constellation for the transmissions, such that the combined mean bit reliabilities for the respective bits of all transmissions are nearly equal (See column 3, lines 13-24, of Golitschek).

Furthermore, column 11, lines 6 to 11 of Golitschek referred to by the Office Action, relates to a selection of signal constellation patterns for the individual retransmissions according to a predetermined scheme. This sequence of signal constellation patterns can be signaled by a transmitter to the receiver prior to usage. It thus appears that the Office Action interprets the selected sequence of signal constellation patterns of Golitschek as the selected sequence of redundancy parameters claimed in the present application. However, the signal constellation pattern of Golitschek cannot be interpreted as a redundancy parameter in the sense of the present application. Claim

terms are to be read in the context of the particular claim, as well as in the context of the entire patent application, including the specification. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1313, 75 USPQ2d 1321, 1326 (Fed. Cir. 2005) (en banc). Moreover, patent applicants like Appellants are entitled to be their own lexicographer, and when the specification reveals a special definition given to a claim term, the inventors' lexicography governs. *Id.* at 1329. *See also CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366, 62 USPQ2d 1658, 1662 (Fed Cir. 2002). For instance, according to paragraph [0039] of the present application, the redundancy parameters are used to define self-decodable redundancy versions and which bits are to be punctured. Thus, the redundancy parameters claimed in the present application clearly differ from Golitschek's signal constellation patterns used for modulating/demodulating and are changed in order to alter levels of reliabilities according to predetermined algorithms (See column 5, lines 7 to 10, of Golitschek). Consequently, the information suggested by Golitschek to be signaled from the transmitter to the receiver merely provides information required for matching modulation/demodulation between the transmission and the reception side.

Therefore, the signal constellation patterns disclosed in Golitschek do not anticipate the redundancy parameters claimed in the present set of claims.

It is respectfully requested that independent claims 1, 16, 23, and 28-30 and related dependent claims be allowed.

REJECTION UNDER 35 U.S.C. § 103:

In the Office Action, at page 6, claims 3-5, 9-10, 12-15, 17-22, and 25-27 were rejected under 35 U.S.C. § 103 as being unpatentable over Golitschek in view of U.S. Publication No. 2003/0133497 to Kinjo et al. (“Kinjo”). The Office Action took the position that Golitschek and Kinjo disclose all the aspects of dependent claims 3-5, 9-10, 12-15, 17-22, and 25-27. The rejection is traversed and reconsideration is requested.

As will be discussed below, Golitschek and Kinjo fail to disclose or suggest the elements of any of the presently pending claims.

Dependent claims 3-5, 9-10, and 12-15 depend from independent claim 1, dependent claims 17-22 depend from independent claim 29, and dependent claims 25-27 depend from independent claim 30. Because the combination of Golitschek and Kinjo must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claims 3-5, 9-10, 12-15, 17-22, and 25-27, the arguments presented above supporting the patentability of independent claims 1, 29, and 30 over Golitschek are incorporated herein.

Kinjo generally describes processing a data stream for high speed wireless transmission. At the transmission side, Kinjo rate-matches an encoded stream of combined information bits and corresponding cyclic redundancy bits in two stages. The first rate matching stage punctures (throws away) or repeats bits such that the number of bits in the data stream is equal to the size of a mobile unit buffer. The second rate

matching stage further punctures or alternately repeats bits in the data stream so that the total number of bits in the resulting data stream is equal to the frame size of the transport channel. The bits punctured or repeated by the second rate matching varies according to different versions of parameters for any retransmissions. At the receiver side, the two-stage rate matching is reversed to restore the original encoded data stream. The encoded data stream is then decoded and repeated, if necessary.

Therefore, Kinjo merely has been cited as describing details of an uplink layer signaling protocol. However, Kinjo does not cure the deficiencies of Golitschek. Similarly to Golitschek, Kinjo is silent as to teaching or suggesting, at least, “providing a set of predetermined sequences of redundancy parameters, selecting at least one of said set of predetermined sequences, and transmitting information indicating the selected at least one sequence to a terminal device,” as recited in independent claim 1, at least, “a receiver configured to receive information indicating a selected sequence of redundancy parameters, and a parameter generating unit, operably connected to said receiver, configured to generate said selected sequence of redundancy parameters for an automatic repeat request function in response to the receipt of said information,” as recited in independent claim 29, and at least, “a selecting unit configured to select a sequence of redundancy parameters, a generator, operably connected to said selecting unit, configured to generate information indicating said selected sequence, and a transmitter, operably connected to said selecting unit, configured to transmit said information to a terminal device,” as recited in independent claim 30.

Accordingly, a combination of Golitschek and Kinjo would not teach or suggest all the recitations of independent claims 1, 29, and 30 and related dependent claims 3-5, 9-10, 12-15, 17-22, and 25-27.

In view of the foregoing, it is respectfully requested that claims 3-5, 9-10, 12-15, 17-22, and 25-27 be allowed.

CONCLUSION:

In view of the above, Applicants respectfully submit that the claimed invention recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicants further submit that the subject matter is more than sufficient to render the claimed invention unobvious to a person of skill in the art. Applicants therefore respectfully request that each of claims 1-30 be found allowable and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the Applicants respectfully petition for an appropriate extension of time.

Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

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Respectfully submitted,


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